

TEACHING TECHNOLOGY INTO THE LAW CURRICULUM

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ABSTRACT

The role technology plays in the legal profession is growing. It is, therefore, incumbent on legal educators to prepare law students for a profession that leverages current and emerging technologies, while mitigating potential risks. A desktop analysis was performed on all technology-focused courses offered at Australian and New Zealand law schools and at the top five universities in the United States and the United Kingdom to identify common themes and characteristics. The authors then share their experiences teaching a technology-focused course at a small regional university. The aim of this article is to stimulate greater discussion about how universities teach technology into the law curriculum, not whether such a course is needed.

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I INTRODUCTION

Technology (specifically, information technology) is influencing and will continue to influence legal practice.¹ According to the *Future of Law and Innovation in the Profession* report, published by the New South Wales Law Society in 2017, ‘technology is already transforming the delivery of legal services ... of a magnitude that could take many by surprise’.² In response, many Australian law schools offer courses designed to prepare law students for the opportunities and challenges technology poses for legal practice. In Part II, this article begins with a summary of the literature on the growing role of technology in the legal profession and the role law schools can play to ease its disruptive effects. Part III summarises the findings of a desktop review of the technology-focused courses (‘TFCs’) offered in Australian law schools. This review reveals the types of TFCs universities are offering (undergraduate vs postgraduate, core vs elective, etc) and the key technologies they are discussing. Part IV reports on the TFCs offered in New Zealand and the top five law schools in the United States and the United Kingdom, before comparing these findings with the TFCs offered in Australia. This analysis exposes some uncertainty regarding the role of technology in the legal profession and its potential effect on graduate employability. In Part V, the authors share their experiences and reflections in delivering a TFC at a regional university for the first time, including assessment design. This section will be of interest to academics who currently teach a TFC or hope to do so in the future.

II LITERATURE REVIEW

It is unclear whether new and emerging technologies will disrupt the legal profession to the extent some are predicting.³ Some are concerned this group of technologies, collectively referred to as LegalTech or LawTech,⁴ has the potential to reduce job opportunities for graduate lawyers, which have traditionally involved ‘time-consuming, repetitive tasks requiring relatively low levels of skills and experience’.⁵ What is clear is that some law firms are readily embracing technology in order to offer alternative billing practices (for example, fixed billing), improve efficiencies to remain cost competitive, or otherwise address client demand. To

¹ See Richard Susskind, *Tomorrow's Lawyers: An Introduction to Your Future* (Oxford University Press, 2nd ed, 2017) 3 (‘*Tomorrow's Lawyers*’), who claims that the “more-for-less” challenge, liberalization, and technology’ are the three drivers of change in the legal market.

² Law Society of New South Wales, *The Future of Law and Innovation in the Profession* (2017) 31 <<https://www.lawsociety.com.au/sites/default/files/2018-03/1272952.pdf>>.

³ See especially Susskind, *Tomorrow's Lawyers* (n 1); Richard Susskind, *The End of Lawyers: Rethinking the Nature of Legal Services* (Oxford University Press, 2008); Richard Susskind, *The Future of Law: Facing the Challenges of Information Technology* (Clarendon Press, 1996); Richard Susskind, *Online Courts and the Future of Justice* (Oxford University Press, 2019). Cf Dana Remus and Frank Levy, ‘Can Robots Be Lawyers? Computers, Lawyers, and the Practice of Law’ (2017) 30(3) *Georgetown Journal of Legal Ethics* 501.

⁴ Legal technology (or LegalTech or LawTech) ‘employs information and communications technology tools to enable legal service providers to enhance productivity and deliver greater value to clients’: Law Society of Singapore and Ministry of Law Singapore, *Legal Technology in Singapore: 2018 Survey of Legal Practitioners* (Singapore Academy of Law, 2018).

⁵ Lyria Bennett Moses, ‘The Need for Lawyers’ in KE Lindgren, François Kunc and Michael Coper (eds), *The Future of Australian Legal Education: A Collection* (Thomson Reuters Professional Australia, 2018) 355, 365.

provide one example, blockchain (distributed ledger technology) is heralded as a ‘game-changer’ within many corporate sectors.⁶ In response, several top law firms in Australia are incorporating knowledge of blockchain into their legal practice areas to support clients who are wanting to leverage the benefits of blockchain.⁷

Much has been written about the need for law schools to prepare students for the use of technologies in legal practice,⁸ including criticism that ‘legal education has not kept pace with the IT revolution in law practice’.⁹ While law students may use technology heavily in their personal lives, there is limited capability to transfer these skills into legal practice. As such, there is growing recognition that law schools have been slow to educate students for the technology demands of modern legal practice.¹⁰ This article finds law schools in Australia and overseas are responding to this gap by offering courses examining the impact of technology in specific areas of the law, with some law schools offering specific courses on technology in legal practice.

III TECHNOLOGY-FOCUSED COURSES IN AUSTRALIAN LAW SCHOOLS

A search of all Australian law schools’ websites was performed by the authors between November 2019 and March 2020 to identify TFCs, including undergraduate and postgraduate

⁶ Fred Hawke and Nina Krys, ‘Blockchain: A Catalyst for New Approaches in Insurance’, *Clayton Utz* (Blog Post, 1 March 2018) <<https://www.claytonutz.com/knowledge/2018/march/blockchain-a-catalyst-for-new-approaches-in-insurance>>; Gavin Smith et al, *Blockchain Reaction: Understanding the Opportunities and Navigating the Legal Frameworks of Distributed Ledger Technology and Blockchain* (Allens, September 2016) <<https://www.allens.com.au/globalassets/pdfs/specials/blockchainreport.pdf>>.

⁷ ‘Blockchain’, *PiperAlderman* (Web Page, 2021) <<https://piperalderman.com.au/services/blockchain>>; ‘FinTech’, *PiperAlderman* (Web Page, 2021) <<https://piperalderman.com.au/services/banking-finance/fintech>>; ‘Blockchain and Distributed Ledger Technology’, *Herbert Smith Freehills* (Web Page, 6 August 2018) <<https://www.herbertsmithfreehills.com/our-expertise/services/blockchain-and-distributed-ledger-technology>>; Hawke and Krys (n 6); Allens Linklaters, ‘Allens Releases Landmark Report on Blockchain’ (Media Release, 20 June 2016) <<https://www.allens.com.au/insights-news/news/2016/06/allens-releases-landmark-report-on-blockchain>>.

⁸ Pearl Goldman, ‘Legal Education and Technology II: An Annotated Bibliography’ (2009) 100 *Law Library Journal* 415, in which the author documents the ‘scholarship examining the impact of technology on law schools and legal education between 1970 and 2001’, although this annotated bibliography goes beyond that to 2008; Neal Feigenson, Richard K Sherwin and Christina O Spiesel, ‘Law in the Digital Age: How Visual Communication Technologies Are Transforming the Practice, Theory, and Teaching of Law’ (2006) 12(2) *Boston University Journal of Science and Technology Law* 227, which discusses how legal education must change in order to prepare students for a new world of digital and visual law practice. Describing their own pedagogic toolkit for visual literacy skills, the authors explain how they combine and modify aspects of traditional doctrinal and clinical teaching methods and use classroom focus groups to explore the relationship between words and pictures.

⁹ Kenneth J Hirsh and Wayne Miller, ‘Law School Education in the 21st Century: Adding Information Technology Instruction to the Curriculum’ (2003) 12(3) *William & Mary Bill of Rights Journal* 873; Luke R Nottage and Makoto Ibusuki, ‘IT and Transformations in Legal Practice and Education in Japan and Australia’ (2002) 4 *University of Technology Sydney Law Review* 31; William BT Mock, ‘Informing Law Curricula: Modifying First-Year Courses to Reflect the Information Revolution’ (2001) 51(4) *Journal of Legal Education* 554.

¹⁰ Dan Hunter, ‘The Death of the Legal Profession and the Future of Law’ (2020) 43(4) *University of New South Wales Law Journal* 1199. On the enduring nature of these concerns, see the earlier Natalie Cuffe, ‘Law Student’s Experiences of Information and Information Technology: Implications for Legal Information Literacy Curriculum Development’ in Peter L Jeffery (ed), *AARE 2002 Conference Papers* (Australian Association for Research in Education, 2002) 1 <<http://www.aare.edu.au/02pap/cuf02169.htm>>.

courses (for example, Master's and Juris Doctor courses).¹¹ To qualify as a TFC, the course title had to contain one or more of the following keywords: 'technology' (or 'technologies'), 'tech', 'coding', 'code', 'disruption', 'innovation' (or 'innovative'), 'cyber', 'digital', 'artificial intelligence', 'robot', 'app' (or 'apps'), 'eLaw', 'internet', 'future', 'social media', 'blockchain' or 'information'.¹² These keywords were selected after a small pilot survey demonstrated their utility in capturing as many technology-related courses as possible.

The authors then coded the exported course descriptions in NVivo 12 for Mac (version 12.6.0, 1999–2019) for content analysis based on the frequency of terms or phrases appearing in the course descriptions to uncover common themes.¹³

The current analysis makes no judgement about the use of particular terms in the course descriptions,¹⁴ nor does this analysis examine whether these terms reflect the actual content of the course. Furthermore, this analysis does not assess whether the course adequately prepares students for the opportunities and challenges technology poses to legal practice. Instead, this desktop analysis of law school websites seeks to quantify the prevalence of TFCs, categorise the TFCs according to their enrolment characteristics and identify common themes. The authors acknowledge that the presence of keywords in course titles is an imperfect technique for identifying TFCs.¹⁵ However, due to the limited search functionality on most university websites, this was the only option for a desktop review of course offerings. Despite these limitations, the results nevertheless provide some useful insights into the perceived need to teach technology into the law curriculum.

¹¹ Wherever possible, the authors entered the keywords in the course search field on the university websites. In most instances, however, a manual review of the course titles was required. Non-law courses or interdisciplinary studies were excluded. Courses within MBA programs run by law schools were also excluded. A course had to be coded as a law course or otherwise offered by the law school/faculty. Courses described as 'papers' or 'reading groups' were included where successful completion of summative assessment is required to successfully complete the course. Courses that had nothing to do with technology but included one or more of these words or phrases were excluded from analysis.

¹² Three courses were included for analysis, although no keyword was contained in the course title: 'LLB250 Law, Privacy and Data Ethics', *QUT* (Web Page, 14 May 2021) <<https://www.qut.edu.au/study/unit?unitCode=LLB250>>; 'LLB251 Law and Design Thinking', *QUT* (Web Page, 14 May 2021) <<https://www.qut.edu.au/study/unit?unitCode=LLB251>>; and 'Data Privacy and Security', *QUT Online* (Web Page) <<https://online.qut.edu.au/unit/data-privacy-and-security>>. These courses were included because they form a program of study for either a Minor in Law, Technology and Innovation or a Graduate Certificate in Data and New Technology Law, both of which contain one or more keywords in the program title.

¹³ This is referred to as manifest content using a frequency-based coding system: William Lawrence Neuman, *Social Research Methods: Qualitative and Quantitative Approaches* (Pearson Education, 7th ed, 2014) 374. The authors trialled the development of codes (or 'nodes' in NVivo) using this methodology in a small pilot study involving all law schools in Queensland, the Group of Eight and the Regional Universities Network. The authors refined the preliminary codes and applied them to the whole dataset.

¹⁴ Eg, the vagueness of the term 'artificial intelligence'.

¹⁵ It is acknowledged that some courses may have a technology focus but not include one of the keywords in the course title. For instance, a contract law course with a module on blockchain will not be captured using this methodology unless the course title contains 'blockchain'. The search functionality on most university websites does not permit text searching within course descriptions. To avoid excluding these law schools and to provide the most comprehensive list of TFCs in Australia, the keyword search was limited to course titles, which were searchable on all university websites.

One hundred and forty courses were identified in 31 law schools across 38 universities offering undergraduate or postgraduate qualifications in law. One hundred and twenty-one of the 140 courses were offered in 2020 in 27 law schools. As seen in Table 1, TFCs are not evenly distributed among law schools. Six law schools (University of New South Wales, La Trobe, Australian National University, University of Melbourne, Queensland University of Technology and Western Sydney University) offered over half of all TFCs in 2020. Twenty universities offered one or no TFC in 2020.

Table 1: Australian universities offering TFCs within their law schools in 2020

Law school	TFC offered in 2020	TFC not offered in 2020
University of New South Wales	11	0
La Trobe University	10	1
Australian National University	9	1
University of Melbourne	9	4
Queensland University of Technology	8	1
Western Sydney University	8	0
University of Sydney	8	0
RMIT University	7	0
Monash University	7	0
Bond University	6	1
University of Technology, Sydney	6	0
University of Canberra	5	0
University of New England	4	3
Flinders University	3	0
University of Newcastle	3	0
University of Queensland	3	1
University of the Sunshine Coast	2	0
Macquarie University	2	0
University of Western Australia	2	0
Australian Catholic University	1	0
Deakin University	1	0
James Cook University	1	0
Murdoch University	1	0
Central Queensland University	1	1
Swinburne University of Technology	1	0
Charles Sturt University	1	0
University of Tasmania	1	1
Federation University Australia	0	0
Charles Darwin University	0	0
Curtin University	0	0
Edith Cowan University	0	0
Griffith University	0	1
University of Notre Dame	0	0
Southern Cross University	0	2

University of Southern Queensland	0	1
University of South Australia	0	0
University of Adelaide	0	1
University of Wollongong	0	0
Victoria University	0	0

This high concentration of TFCs in some law schools suggests that these schools may have made a strategic decision to embed technology into the law curriculum, indicating its perceived importance. This observation is not to suggest that other law schools do not consider technology to be important. Other factors may explain why more Australian law schools do not offer TFCs. It is possible, for example, that a law school has decided to embed technology perspectives across the compulsory curriculum, rather than offer a TFC. The cost of delivering TFCs may also be a barrier, especially if the course uses proprietary software.¹⁶

The University of New England and Flinders University are the only law schools that require undergraduate law students to complete a TFC.¹⁷ The Queensland University of Technology, Bond University and RMIT offer a minor, graduate certificate or postgraduate specialisation,¹⁸ which requires the completion of specific TFCs. At the Master’s level, the Master of Laws in Enterprise Governance at Bond University requires the successful completion of ‘LAWS77-591: IT Law, Privacy and Cyber-Security’ and the Juris Doctor at RMIT requires completion of ‘Law and Technology’ and ‘Innovative Justice’.¹⁹

The fact that most law schools (except Flinders University and the University of New England) do not require students enrolled in a Bachelor of Laws (LLB) to complete a TFC appears to contradict the perceived importance of technology in the law curriculum previously identified. Again, it may be that some law schools have embedded technology perspectives across the compulsory curriculum. Alternatively, there may be other pressures that make the introduction

¹⁶ These costs include licence fees or the time and effort associated with securing funding to cover the licence fees. It may be that law schools who do not offer a TFC, or only offer a TFC biannually, lack sufficient resources.

¹⁷ ‘Technology and the Law (LAW499)’, *University of New England* (Web Page) <<https://my.une.edu.au/courses/units/LAW499>>; ‘Topics: INNO1100 Legal Innovation and Creative Thinking: Recognising Opportunities in the Legal Sector’, *Students at Flinders University* (Web Page, 2020) <<https://www.flinders.edu.au/webapps/stusys/index.cfm/topic/main?numb=1100&subj=INNO&year=2020&fees=Y>>; ‘Topics: LLAW3301 Law in a Digital Age’, *Students at Flinders University* (Web Page, 2020) <<https://www.flinders.edu.au/webapps/stusys/index.cfm/topic/main?numb=3301&subj=LLAW&year=2020&fees=Y>>.

¹⁸ ‘Law and Justice: Graduate Certificate in Data and New Technology Law’, *QUT Online* (Web Page) <<https://online.qut.edu.au/online-courses/law-justice/graduate-certificate-in-data-and-new-technology-law>>; ‘Bachelor of Laws (Honours)’, *QUT* (Web Page, 27 August 2021) <<https://www.qut.edu.au/courses/bachelor-of-laws-honours>>; ‘Law Specialisations (Postgraduate): Legal Transformation (JD only)’, *Bond University* (Web Page, 2021) <<https://bond.edu.au/subjects/current-law-specialisations-postgraduate#legal-innovation-technology>>; ‘Online Graduate Certificate in Emerging Technologies and Law’, *RMIT University* (Web Page, 2021) <<https://www.rmit.edu.au/study-with-us/levels-of-study/online/online-graduate-certificate-in-emerging-technologies-and-law>>.

¹⁹ ‘LAWS77-591: IT Law, Privacy and Cyber-Security’, *Bond University* (Web Page, 2021) <<https://bond.edu.au/subject/laws77-591-it-law-privacy-and-cyber-security>>; ‘Masters by Coursework: Juris Doctor’, *RMIT University* (Web Page, 2021) <<https://www.rmit.edu.au/study-with-us/levels-of-study/postgraduate-study/masters-by-coursework/juris-doctor-mc161/mc161p14auscy>>.

of a new compulsory or core course not feasible. In support, it is noteworthy that the majority of TFCs are offered as postgraduate courses (see Table 2).

Postgraduate programs offer greater flexibility compared to undergraduate qualifications in law. For example, the Master of Laws (LLM) does not need to be accredited as a practice pathway for admission. It may also be true that postgraduates are more receptive to further study in legal technology. This could be to give themselves a competitive edge over other graduates seeking employment in the legal sector. Or, graduates in traditional legal roles are encountering the opportunities and challenges posed by technology and seek to better understand its implications for the legal profession. The findings from this analysis indicate that most law schools will continue to offer TFCs at the postgraduate level.

Table 2: Technology-focused courses by program level

Course level	TFC offered in 2020	TFC not offered in 2020
Undergraduate	46	10
Postgraduate	75	9

Beyond these enrolment details, two key observations emerged from the thematic analysis of the TFCs. Both observations revealed a sense of uncertainty — uncertainty in the types of technology that may disrupt the legal profession and uncertainty regarding the impact technology will have on graduate employment. Both are discussed in turn.

A Key Technologies

Based on the course descriptions of TFCs, a list of key technologies perceived to be most significant for society and the legal profession emerges.²⁰ As Table 3 highlights, law schools are preparing students to embrace not only existing technologies but also emerging technologies.

Table 3: Types of technologies in the course descriptions of technology-focused law courses in Australia

Technology	TFC offered in 2020	TFC not offered in 2020	Total
Internet	23	7	30
Artificial intelligence	24	3	27
Machine learning	18	2	20
Automation	14	1	15
Blockchain	14	1	15
Smart contracts	11	1	12

²⁰ Based on the data available it is not possible to identify what, if any, enquiries or consultations course coordinators made in deciding which technologies are expected to be the most significant for society and the legal profession. This raises an interesting question as to whether the legal academy is well placed to make this determination and, if not, who else ought to be consulted? However, the answers to these questions are beyond the scope of this article.

Expert systems	9	0	9
Social media	9	0	9
Robotics	7	1	8
Data analytics	7	0	7
Cloud computing	5	1	6
Smart technology	5	0	5
Internet of Things	3	1	4
Natural language processing	3	0	3
Peer-to-peer	2	1	3
Prediction	2	0	2
Technology-assisted review	2	0	2
Drones	1	0	1
Practice management software	1	0	1

At one end of the spectrum, TFCs are considering the impacts of the internet, automation (such as document assembly), expert systems (the logic framework behind many chatbots), social media, robotics, data analytics and cloud computing. These technologies are already ubiquitous in society. At the other end of the spectrum, TFCs are considering the impact of artificial intelligence, machine learning, blockchain and smart contracts — technologies that exist but are not yet commercially available, readily adopted or applied in legal practice.

This dichotomy between existing and emerging technologies is reflected in the course descriptions, with some courses upskilling students for the technology they will likely encounter in legal practice. Other courses take a more abstract or theoretical approach to technology, considering the potential consequences of technologies that are yet to be demonstrated in the legal profession. Both approaches have merit and explain why some law schools offer multiple TFCs.

B *Future of the Legal Profession*

Within the 140 TFCs offered in Australian law schools, few are dedicated to the impacts of technology on the legal profession. The authors identified technology-focused legal practice courses ('TFLPC') based on the aims or scope in the course description. Of the 140 TFCs identified, 25 courses are TFLPCs, equating to 17.8%. Other significant categories of TFCs include information technology law courses (59 courses or 42.1%) and intellectual property courses (10 courses or 7.1%).

Examining the TFLPCs in more detail, it is possible to gain some insight into how the impact of technology on the legal profession is perceived. Within the course descriptions of the TFLPCs, technological change is described as involving 'disruption' (10 courses), 'innovation' (six courses) and rapid or fast change (four courses). Eight TFLPCs (28.5%) involve some degree of industry partnership — with a law firm, technology provider or not-for-profit — while 25% of TFLPCs involve the use of software or development of a chatbot or app. In one instance (the University of Melbourne's 'Law Apps' course), this partnership explicitly aligns

the course with one technology provider, Neota Logic.²¹ In 12 courses (42.8%), skills development (for example, decision-making, coding, design thinking) is one of the explicit goals.

Perhaps unsurprisingly, the TFLPCs analysis uncovers a degree of uncertainty in future employment prospects of graduate lawyers. Six TFLPCs (21%) explicitly aim to improve students' employment prospects within the legal profession. This aim frequently equates to training law students in LegalTech and other skills not traditionally associated with the practice of law. The implication is that LegalTech threatens to reduce graduate employment opportunities in the legal profession by taking away work that could otherwise be performed by a law graduate, and remaining positions will more likely go to applicants who know how to use the technology. As stated earlier, it is yet to be seen whether this threat is actual or not.²² If the threat is not overstated, this may see the number of law schools offering TFLPCs increase as students come to view law schools without a TFLPC as unconcerned with graduate employability.²³

Having scanned Australian law schools to better understand which TFCs are currently or have previously been offered, this article now examines what other select law schools are offering overseas. The findings from overseas highlight that Australian law schools are not alone in identifying the need to better equip law graduates for the impacts of technology in law.

IV OVERSEAS LAW SCHOOLS

The authors employed the same methodology to perform a content analysis of course descriptions for select law schools in the US and the UK. All New Zealand law schools were also included for analysis, as there are only six law schools in New Zealand. The authors selected the top five ranked law schools in the US and UK based on the Times Higher Education's World University Rankings 2020.²⁴

Table 4: US, UK and New Zealand law schools offering TFCs and TFLPCs in 2020 and previously

Jurisdiction	Law school	World ranking	TFCs offered in 2020	TFCs not offered in 2020	TFLPCs offered in 2020	TFLPCs not offered in 2020
US	Stanford University	1	12	0	1	0
US	Berkeley	6	12	2	0	0
UK	University of Edinburgh	18	11	4	1	0
US	New York University	9	10	0	0	0

²¹ 'Law Apps (LAWS90033)', *The University of Melbourne* (Web Page, 18 December 2020) <<https://handbook.unimelb.edu.au/2020/subjects/laws90033/print>>.

²² But see Susskind, *Tomorrow's Lawyers* (n 1) ch 13.

²³ Of course, if a student is not intending to go into legal practice the lack of a TFLPC may be an advantage, especially if the TFLPC is a core course.

²⁴ 'World University Rankings 2020 by Subject: Law', *Times Higher Education: World University Rankings* (Web Page) <<https://www.timeshighereducation.com/world-university-rankings/2020/subject-ranking/law#!>>.

US	Duke University	6	5	7	1	2
US	University of Chicago	5	4	0	0	0
UK	London School of Economics	8	4	0	0	0
NZ	University of Waikato	N/A	4	0	0	0
US	Yale University	3	3	0	0	0
NZ	Victoria University of Wellington	N/A	3	0	0	0
UK	University College London	14	2	0	0	0
NZ	University of Otago	N/A	2	0	0	0
NZ	University of Auckland	N/A	1	0	0	0
NZ	University of Canterbury	N/A	1	0	0	0
UK	University of Cambridge	2	0	0	0	0
UK	University of Oxford	4	0	0	0	0
NZ	Auckland University of Technology	N/A	0	0	0	0

The results in Table 4 reveal similar results to those found in the analysis of Australian law schools. Of the 17 law schools analysed in the US, UK and New Zealand, 14 law schools (82.3%) offered a TFC in 2020. In Australia, 71% of law schools offered a TFC in 2020. While the percentage of overseas law schools offering a TFC is higher than in Australia, the vast majority of law schools across all jurisdictions were offering TFCs in 2020. Another similarity in the results is that TFCs among overseas law schools are not evenly distributed but concentrated, like in Australia. Across all jurisdictions studied, few law schools offer many TFCs, while the majority of law schools offer one or a small number of TFCs — often the same course offered in both the undergraduate and postgraduate programs. Across the 14 US, UK and New Zealand law schools offering a TFC in 2020, 74 courses were identified. Most of these courses are IT law courses (44 courses or 59.4%). Five courses are intellectual property courses (6.7%) and four TFCs each are in the fields of criminal law and community legal practice (5.4% each).

One point of difference between the overseas and Australian jurisdictions is the frequency of TFLPCs. Overseas, only five TFCs focus on legal practice (5.74%). This number is significantly lower than in Australia, where 17.8% of TFCs are TFLPCs. The comparatively small sample size (only the top five law schools in the US and UK) and differences between the jurisdictions (for example, law is a postgraduate degree in the US and more US law schools offer TFCs on specific issues of cybersecurity, cyberwarfare and national security) means that direct comparisons with Australia are problematic. Nevertheless, it is interesting to note that among the top five law schools in the US and UK and all New Zealand law schools, so few universities offer TFLPCs.

A possible interpretation of this finding may relate to the challenges posed by staffing, rather than the perceived need or merits of offering TFLPCs. The most considerable obstacle to a greater proliferation of TFLPCs in Australia and overseas may be a lack of academic staff interest or expertise in teaching such a course.²⁵ It may be that law societies, law student associations and even LegalTech providers may need to highlight the importance of preparing students for a disrupted legal profession. The present analysis provides some empirical evidence of the student interest in technology and law, to which many universities are responding. However, fewer law schools in Australia and overseas are offering courses focused on the impacts of technology within the legal profession — the very profession that is undergoing considerable change and where many students hope to find employment after graduation. The effects emerging technologies are having and will continue to have on the legal profession is an area in need of scholarship, which may encourage legal academics to research and teach in this field. The authors' reflections below on teaching a TFLPC for the first time in 2019 will hopefully stimulate further interest.

V LEGAL TECHNOLOGY AND PRACTICE COURSE

'Law, Technology & Your Future' ('LAW3481')²⁶ was developed by Dr Aaron Timoshanko, Mr Angus Murray and Mr Richard Gifford ('teaching team') at the University of Southern Queensland ('USQ'). The inspiration and strategic direction in developing LAW3481 came from Associate Professor Caroline Hart and from discussions at the General Counsel, Compliance and Risk Forums 2016 and 2018, convened by Clyde & Co and Hinshaw & Culbertson.²⁷ LAW3481 was offered online and on-campus at Springfield, Queensland in Semester 2, 2019. The delivery mode was face-to-face, which was complemented with online communication, learning resources and assessment. Live streaming (via Zoom) and recordings of all lectures and presentations provided synchronous and asynchronous options for enrolled students.

The focus of LAW3481 was on the changes occurring within the legal profession, including developments in LegalTech, the growth in multi-disciplinary partnerships, incorporated legal practices, and the commoditisation and outsourcing of legal work. The primary aim of LAW3481 was to instil in students the knowledge and skills required to evaluate new technologies and opportunities critically. The course did not attempt to teach future lawyers

²⁵ The challenges associated with staffing may be exacerbated by the formal requirements that must be met to be appointed as an instructor — eg, the TEQSA requirements in Australia — or by a lack of funding for casual staff.

²⁶ The course was originally named 'Emerging Legal Technologies and Practice'.

²⁷ Now the 'General Counsel & Compliance Strategy Forum brings together the finest thought leaders and solution providers in a two-day compliance and counsel networking event which promises to inspire debate through our world-class engagement platforms and ultimately broaden your expertise to add real value and insight back into the organisation you represent': 'Home', *General Counsel and Compliance Strategy Forum* (Web Page, 2021) <<https://www.gcandcompliancestrategyforum.com>>. The Forum was attended by Associate Professor Caroline Hart.

how to code, unlike some TFCs, but sought to impart an open yet ‘hype-resistant’ mindset towards technology and changes in the legal profession.²⁸

In familiarising students with key developments in LegalTech, the teaching team invited LegalTech providers to showcase their products, including two practice management software providers, two chatbot/decision-tree providers and one provider of e-Discovery services. Early in the course’s development, the teaching team decided not to focus on one type of technology or technology provider, in order to reduce any perception of bias and promote balance among established and start-up technology companies.²⁹ It was also a strategic decision to encourage students to embrace disruptive thinking and be adaptable in a dynamic legal environment.

The course covered nine topics over 13 weeks. After an introduction to the impacts and opportunities technology presents to the legal profession, judiciary and clients, the course provided an overview and critical analysis of some existing LegalTech. This analysis involved getting hands-on with some software, so students could gain experience and familiarity with some of the products available at the time.³⁰

Examining the regulatory environment, including ethics, privacy and cybersecurity, was a significant component of the course. Some of these issues were raised during an in-class panel discussion, hosted by Mr Angus Murray and featuring Ms Chantal McNaught from LEAP, Mr Steve Tyndall from NextLegal, Mr Warwick Walsh from Lawcadia, Mr David Bowles from the Queensland Law Society and Ms Jess Caire from PEXA. The panel session was recorded in the USQ studio and is now available on YouTube.³¹ This panel discussion exposed students to a range of perspectives from legal practitioners, former practitioners and developers of technology solutions on the regulation and ethical implications of technology in legal practice.

LAW3481 also examined the disruption that alternative business structures (for example, multi-disciplinary partnerships, incorporated legal practices) pose to the legal profession, discussed project management and collaboration in the provision of legal services, and reviewed the judicial use of technology in Australia and overseas. Finally, the course

²⁸ By ‘hype-resistant’ the authors refer to a mindset that is resistant to the excitement surrounding new technological developments and that critically evaluates claims made in marketing the product or service.

²⁹ The authors acknowledge that incorporating technology providers raises potential ethical issues, including the payment of licence fees and the ownership of student intellectual property. All technology providers offered trial or student licences for no fee. The ownership of intellectual property was also mitigated as students followed the directions of an instructor in developing a basic understanding of the technology. No assessment items or projects were tied to any technology. The self-interest of technology providers was also acknowledged and ameliorated by inviting alternative/competitor products. In this regard, the students’ experience was not unlike attending a showcase or conference run by the Australian Legal Technology Association, which was discussed with students.

³⁰ Inviting LegalTech providers to showcase their products to law students also provided some valuable opportunities for students to learn about alternative career pathways in law. More than one guest presenter discussed their journey through law school and legal practice before encountering a difficulty, issue or problem that they saw the opportunity to solve through technology. This discussion offered law students a first-hand account of entrepreneurialism.

³¹ Aaron Timoshanko, ‘Emerging Legal Technologies and Practice Panel Session’ (YouTube, 6 September 2019) <<https://www.youtube.com/watch?v=pTO118ahCA>>.

considered the jurisprudence of technology and an overview of current legal research methodologies.

A Assessment

The assessment for LAW3481 consisted of four items. An online quiz, worth 10% of students' overall grade, assessed students' understanding of the fundamental principles before the course moved to more advanced concepts. The next two assessment items prepared students for the major assessment, a project proposal. The second assessment (worth 20% of students' overall grade) was a SWOT (strengths-weaknesses-opportunities-threats) analysis for a technology solution within a legal practice with legal and non-legal disciplines. Students could pick any technology solution they were interested in, whether the solution already existed or was an idea they would like to explore in a semi-structured way throughout the course. The third assessment required students to peer review another student's SWOT analysis for 10% of their overall grade. The peer review task required students to answer four questions about the SWOT analysis they received:

- (a) Do you consider this proposal viable?
- (b) Are there any immediate ethical issues with the proposal?
- (c) Would you invest in this product/service?
- (d) Do you have any additional comments regarding how the proposal could be refined?

This assessment promoted critical thinking (of their peer's and their own proposal) and evidenced their understanding and application of the regulatory and ethical framework applicable to lawyers. The peer review was de-identified and given to the author of the SWOT analysis so that their technology solution and the subsequent project proposal would benefit from another's perspective, in addition to the marker's feedback.

The major assessment was a project proposal, which accounted for 60% of the students' final grade in the course. Students could base their project proposal on the same technology solution they examined in their SWOT analysis or choose an entirely new technology solution. Such flexibility was necessary in case the technology solution proposed in a student's SWOT analysis, which had undergone peer review, was not viable or otherwise problematic. The project proposal was structured as a letter of proposal³² — a format that contains the most relevant components of a formal business proposal but is more concise. Within the letter of proposal, students had to address nine questions, including the financial viability of the technology solution, the scope of work and the key personnel required for implementation. Students were encouraged to collaborate on the technology solution proposed, but the letter of proposal had to be the students' independent work.

³² For a discussion and an example of a letter proposal, see Tom Sant, *Persuasive Business Proposals: Writing to Win More Customers, Clients, and Contracts* (AMACOM, 3rd ed, 2012) ch 11.

B *Experiences and Reflections*

Student enrolments in LAW3481 were surprisingly low (nine students) given the apparent student interest at other law schools, if the proliferation of TFCs in Australian law schools is an indication of student interest. Most electives at USQ, generally, have 20 to 30 student enrolments. Several factors may explain the low student enrolments. Some attribution is due to this being a new course, so there is consequentially a lack of ‘word of mouth’ among previous students. Furthermore, the course specifications were only available to students after the commencement of Semester 1 that year, meaning students who planned their enrolment at the beginning of the year were unlikely to learn about this new course available in Semester 2. Nevertheless, low enrolments in LAW3481 may expose the need for law schools and individual academics to communicate the important role that technology will play in the professional lives of law graduates, whether or not they are in traditional legal roles. While some students are highly technologically literate, TFLPCs like LAW3481 are not just about improving students’ technological literacy. TFLPCs aim to equip students with the ability to evaluate and assess the benefits, limitations and costs associated with deploying new technologies within legal practice. In fact, without proper precautions, a high degree of comfort or familiarity with technology associated with high levels of technological literacy may result in complacency or overlooking some of the risks associated with new technologies. For example, the reflexive acceptance of terms of service that is so common could have significant consequences in a law firm. Even existing and relatively benign technologies, such as email, have dramatically changed the practice of law by facilitating offshoring and outsourcing of legal work. Students must understand the forces driving these changes, so they are not caught off-guard as the legal profession continues to evolve to meet new and existing challenges.

Students enrolled in LAW3481 were enthusiastic and engaged in the lectures, tutorials and course materials, with several students exceeding the teaching team’s expectations in the assessment. The students’ enthusiasm was reflected in their final grades, with 32% receiving a high distinction or an ‘A’. The anonymous student evaluations of teaching (‘SET’) were also overwhelmingly positive. Four of the nine enrolled students participated in the SET. Students reported high levels of satisfaction with the course and there was widespread agreement that the assessment tasks contributed to their learning. These findings suggest that TFLPCs like LAW3481 are well received by students and make a valuable contribution to students’ educational experience at university.

VI CONCLUSION

Technology is increasingly impacting specific areas of law and the practice of law generally. Law firms are already exploring and adopting technologies into their practices, as are their clients. Many law schools are responding to this changing environment to improve graduate employability but also to engage students in deeper discussions about new ways of creating legal relationships.

A key theme to emerge from this research is uncertainty. The desktop analysis revealed a degree of uncertainty regarding the future impacts of technology within the legal profession. Some TFCs that upskill students based on existing technologies are uncertain (or unconvinced) about emerging technologies that have the potential to disrupt legal practice. Other TFCs prepare students for a disrupted profession based, in part, on emerging or future technologies, of which the anticipated benefits or threats are uncertain.

The uncertainty about the role of technology in the legal profession is unsurprising. Society stands at the precipice of potentially significant technological advances (quantum computing, artificial general intelligence), which can dramatically change the course of human history, including the legal sector. In the meantime, new applications of existing technologies, such as machine learning and blockchain, will emerge in law. Whether the existing or emerging technologies deliver what is promised (or something else) or join the list of other technologies that were oversold on the ‘hype cycle’ is yet to be seen. No one expects law academics to predict the future, so the challenge for law schools is how to best prepare students in the face of such uncertainty. One approach is to offer a TFLPC, not unlike LAW3481, that focuses on developing an open and inquisitive mindset towards new technology, while also transferring the knowledge and skills that new lawyers need to examine such technology critically. This is not the only approach. We hope this article contributes to a broader discussion about how universities teach technology into the law curriculum, not whether such a course is needed.

Our desktop analysis suggests that TFCs will be a regular elective offered at Australian law schools, especially at the postgraduate level, for the foreseeable future. Further research is required to uncover why some law schools are prioritising technology more than others; is it a lack of funding, a lack of appropriate staffing or something else? Further qualitative research, ideally with the Deans or Heads of the law schools, may also uncover why more TFCs are not core courses.

At the very edges of this article, questions emerge regarding the place of technology potentially being referenced in the Priestley 11 (the 11 compulsory subject areas required for admission as a legal practitioner), and the need for a more cohesive and coordinated approach charted by leaders within the academy. These questions go to the very heart of what society and employers expect from law schools. Is the role of law schools (and universities more generally) to produce job-ready graduates? Or, are law schools responsible for doctrinal knowledge, with technological competency the responsibility of firms and other training providers? We leave these questions for future scholarship. Until then, academics within many law schools will need to champion TFCs to ensure all graduates are prepared to face the challenges and opportunities technology poses in the legal profession.